## **Supporting Information**

## An advanced PdNPs@MoS<sub>2</sub> nanocomposite for efficient oxygen evolution reaction in alkaline media

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**Fig S1:** EDS Mapping of MoS<sub>2</sub> Pristine and Pd doped sample.



Fig S2: HAADF – STEM micrographs at different magnifications of MoS<sub>2</sub> pristine.



Fig S3: HAADF – STEM micrographs at different magnifications of Pd doped sample.

**Comment [UdMO]:** Please use always the same name. In this case PdNPs@MoS<sub>2</sub> was used.



**Fig S4.** PdNPs@MoS<sub>2</sub> sample a) STEM-HAADF micrograph. b,c) EDS position analysis of the spot 3 (b) and spot 4 (c), highlighted in the STEM image.



Fig S5. Polarization curve of different catalyst containing high concentration of Pd (Sample-3)



**Fig S6:** CV curves at various scan rates of (a) Palladium Pristine, (b) MoS<sub>2</sub> Pristine, (c, d) Sample-1 & Sample-2 for the determination of double layer capacitance.